Name:

p1105: Factoring when $a = 1$ (v4)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5. Focus on finding factor pairs of -24. Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 - 10x + 21$

$$(x - 3)(x - 7)$$

2. Factor $x^2 - 10x + 16$

$$(x - 8)(x - 2)$$

3. Factor $x^2 - 10x + 25$

$$(x - 5)(x - 5)$$

4. Factor $x^2 + 10x + 24$

$$(x + 6)(x + 4)$$

5. Factor $x^2 + 13x + 36$

$$(x + 4)(x + 9)$$

6. Factor $x^2 + 4x - 12$

$$(x - 2)(x + 6)$$

7. Factor $x^2 + 3x - 4$

$$(x + 4)(x - 1)$$

8. Factor $x^2 - 9x + 20$

$(x-5)(x-4)$

9. Factor $x^2 - 5x + 4$

$(x-1)(x-4)$

10. Factor $x^2 - 2x - 35$

$(x+5)(x-7)$

11. Factor $x^2 + 6x - 7$

$(x-1)(x+7)$

12. Factor $x^2 - 12x + 32$

$(x-8)(x-4)$

13. Factor $x^2 - 9x + 18$

$(x-3)(x-6)$

14. Factor $x^2 + 9x + 20$

$(x+4)(x+5)$

15. Factor $x^2 - 2x - 3$

$(x+1)(x-3)$